IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please CANCEL claim 3 without prejudice or disclaimer and AMEND claims 1 and 2-11 and ADD new claims 12-14 in accordance with the following:

1. (currently amended) A mold design system for designing a mold for use in molding a product, comprising:

two-dimensional projection means for producing two-dimensional projection data by projecting edges of a product shape represented by three-dimensional graphic data onto a plane perpendicular to a mold opening direction; and

parting line determination means for sequentially determining, out of candidate edges contiguous to a determined parting line ~~already determined as parting line~~, a candidate edge forming a largest interior angle with said determined parting line at a contact point therewith on said two-dimensional projection data, as ~~said~~ a parting line~~, whereby a parting line~~ of said mold for molding said product shape ~~is determined~~, wherein

when said candidate edge forming said largest interior angle intersects with another candidate edge an even number of times, said candidate edge is set as said parting line, and

when said candidate edge forming said largest interior angle intersects with said other candidate edge an odd number of times, said other candidate edge is set as said parting line.

2. (currently amended) A mold design system according to claim 1, wherein said parting line determination means determines, out of the edges within said two-dimensional projection data, an edge whose middle point is positioned farthest from a central point of said product, as a first parting line.

3. (cancelled)

4. (currently amended) A mold design system according to claim ~~3~~1, wherein said parting line determination means outputs a selection request to a user when said candidate edge forming said largest interior angle with said determined parting line at said contact point therewith on said two-dimensional projection data crosses any other candidate edge at least two points, and determines a selected one of said candidate edges as said parting line.

5. (currently amended) A mold design system according to claim 1, wherein ~~if~~ when there exist a plurality of candidate edges forming said largest interior angle with said determined parting line at said contact point therewith, said parting line determination means detects, out of other end-connected edges contiguous to other end points of said plurality of candidate edges, one of the plurality of candidate edges forming a largest interior angle with said determined parting line, and determines one of said candidate edges between said detected one and said determined parting line, as said parting line.

6. (currently amended) A mold design system according to claim 5, wherein ~~if~~ when said parting line determination means is incapable of determining one of said candidate edges to be set to ~~a~~ said parting line due to an existence of a plurality of said other end-connected edges forming said largest interior angle with said determined parting line, said parting line determination means determines, as said parting line, one of said plurality of said candidate edges forming said largest interior angle with said determined parting line at said contact point therewith, said one of said plurality of ~~said~~ candidate edges having a largest length of all said plurality of said candidate edges.

7. (currently amended) A mold design system according to claim 1, wherein ~~if~~ when there exists a parallel edge which is parallel to said mold opening direction among said candidate edges, said parting line determination means ~~deals with~~designates a maximum value of an interior angle between another end-connected edge contiguous to another end point of said parallel edge and said determined parting line, ~~such that~~as said maximum value ~~is~~ of an interior angle between said parallel edge and said determined parting line.

8. (currently amended) A mold design system according to claim ~~1~~2, wherein ~~if~~ when said determined parting line other than said first parting line exists among edges contiguous to another end point of said candidate edge forming said largest interior angle with said determined parting line at said contact point therewith, said parting line determination means prompts said user to ~~correct~~ select said parting line instead of determining said candidate edge forming said largest interior angle with said determined parting line at said contact point

therewith, as said parting line.

9. (currently amended) A mold design system according to claim 1, wherein ~~if~~ when said candidate edge forming said largest interior angle with said determined parting line at said contact point therewith crosses said determined parting line, said parting line determination means prompts said user to ~~correct~~ select said parting line instead of determining said candidate edge forming said largest interior angle with said determined parting line at said contact point therewith, as said parting line.

10. (currently amended) A mold design system according to claim 1, wherein said two-dimensional projection means generates said two-dimensional projection data including edges of said slide core, ~~if~~ when a shape of said slide core is determined, and

wherein said parting line determination means carries out a parting line determining process while taking said edges of said slide core as well into account.

11. (currently amended) A computer-readable recording medium which stores a mold design program for use in designing a mold for molding a product, the program comprising:

~~the computer-readable recording medium causing a computer to function as:~~

two-dimensional projection means for producing two-dimensional projection data by projecting edges of a product shape represented by three-dimensional graphic data onto a plane perpendicular to a mold opening direction; and

parting line determination means for sequentially determining, out of candidate edges contiguous to a determined parting line ~~already determined as parting line~~, a candidate edge forming a largest interior angle with said determined parting line at a contact point therewith on said two-dimensional projection data, as ~~said~~ a parting line~~, whereby a parting line~~ of said mold for molding said product shape ~~is determined~~, wherein

when said candidate edge forming said largest interior angle intersects with another candidate edge an even number of times, said candidate edge is set as said parting line, and

when said candidate edge forming said largest interior angle interests with said other candidate edge an odd number of times, said other candidate edge is set as said parting line.

12. (new) An apparatus for designing a mold of a 3D product, the apparatus comprising:

means for producing 2D projection data by projecting edges of a shape of the 3D product onto a plane perpendicular to a mold opening direction of the mold;

means for determining a parting line of the mold corresponding to an outermost edge out of the projecting edges of the shape of the 3D product;

means for determining the projected edges which are contiguous to the determined parting line; and

means for selecting the contiguous projected edge having a largest interior angle with the determined parting line, to be the parting line, wherein when the contiguous projected edge selected intersects with another contiguous projected edge an even number of times, the contiguous projected edge selected is set as the parting line, and when the contiguous projected edge selected intersects with the other contiguous projected edge an odd number of times, the other contiguous projected edge is set as the parting line.

13. (new) A method for designing a mold of a 3D product, the method comprising:

producing 2D projection data by projecting edges of a shape of the 3D product onto a plane perpendicular to a mold opening direction of the mold;

determining a parting line of the mold corresponding to an outermost edge out of the projecting edges of the shape of the 3D product;

determining the projected edges which are contiguous to the determined parting line; and

selecting the contiguous projected edge having a largest interior angle with the determined parting line, to be the parting line, wherein when the contiguous projected edge selected intersects with another contiguous projected edge an even number of times, the contiguous projected edge selected is set as the parting line, and when the contiguous projected edge selected intersects with the other contiguous projected edge an odd number of times, the other contiguous projected edge is set as the parting line.

14. (new) An apparatus to create a mold of a 3D product, the apparatus comprising:

a 2D projection unit to produce 2D projection data by projecting edges of a shape of the 3D product onto a plane perpendicular to a mold opening direction of the mold;

a parting line determination unit to determine a parting line of the mold corresponding to an outermost edge out of the projecting edges of the shape of the 3D product and to determine the projected edges which are contiguous to the determined parting line; and

means for selecting the contiguous projected edge having a largest interior angle with the determined parting line, to be the parting line, wherein when the contiguous projected edge

selected intersects with another contiguous projected edge an even number of times, the contiguous projected edge selected is set as the parting line, and when the contiguous projected edge selected intersects with the other contiguous projected edge an odd number of times, the other contiguous projected edge is set as the parting line.